Release notes for ENDF/B Development e-085_At_000 evaluation

October 13, 2016

- `fudge-4.0` Warnings:

  1. Mislabled emitted particle
     Reading ENDF file: ../e-085_At_000.endf (Error # 0): ZAP messed up

     `WARNING: photon most likely labelled as an electron (ZAP = 11), converting to ZAP = 0`

  2. FIXME: Generic fudge unimplemented message
     reaction label 1: e- + At + gamma [bremsstrahlung] / Product: e- (Error # 0): Generic unimp (c)

     `WARNING: Checking not yet implemented for energyLoss type data`

  3. FIXME: Generic fudge unimplemented message
     reaction label 2: e- + At [excitation] / Product: e- (Error # 0): Generic unimp (c)

     `WARNING: Checking not yet implemented for energyLoss type data`

- `fudge-4.0` Errors:

  1. Calculated and tabulated thresholds don't agree
     reaction label 0: e- + At [large angle Coulomb scattering] / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!`

  2. Calculated and tabulated thresholds don't agree
     reaction label 1: e- + At + gamma [bremsstrahlung] / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!`

  3. Calculated and tabulated thresholds don't agree
     reaction label 2: e- + At [excitation] / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!`

  4. Calculated and tabulated thresholds don't agree
     reaction label 3: e- + e- + At1s1/2 / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 96068. eV!`

  5. Calculated and tabulated thresholds don't agree
     reaction label 4: e- + e- + At2s1/2 / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 17473. eV!`

  6. Calculated and tabulated thresholds don't agree
     reaction label 5: e- + e- + At2p1/2 / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 16840. eV!`

  7. Calculated and tabulated thresholds don't agree
     reaction label 6: e- + e- + At2p3/2 / Cross section: (Error # 0): Threshold mismatch

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```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 14215. eV!
```

8. Calculated and tabulated thresholds don't agree
reaction label 7: e- + e- + At3s1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4285.5 eV!
```

9. Calculated and tabulated thresholds don't agree
reaction label 8: e- + e- + At3p1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3991.8 eV!
```

10. Calculated and tabulated thresholds don't agree
reaction label 9: e- + e- + At3p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3398.5 eV!
```

11. Calculated and tabulated thresholds don't agree
reaction label 10: e- + e- + At3d3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 2911.4 eV!
```

12. Calculated and tabulated thresholds don't agree
reaction label 11: e- + e- + At3d5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 2786.2 eV!
```

13. Calculated and tabulated thresholds don't agree
reaction label 12: e- + e- + At4s1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1021.4 eV!
```

14. Calculated and tabulated thresholds don't agree
reaction label 13: e- + e- + At4p1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 890.65 eV!
```

15. Calculated and tabulated thresholds don't agree
reaction label 14: e- + e- + At4p3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 741.71 eV!
```

16. Calculated and tabulated thresholds don't agree
reaction label 15: e- + e- + At4d3/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 527.08 eV!
```

17. Calculated and tabulated thresholds don't agree
reaction label 16: e- + e- + At4d5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 499.28 eV!
```

18. Calculated and tabulated thresholds don't agree
reaction label 17: e- + e- + At4f5/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 217.93 eV!
```

19. Calculated and tabulated thresholds don't agree
    reaction label 18: e- + e- + At4f7/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 211.2 eV!
    ```

20. Calculated and tabulated thresholds don't agree
    reaction label 19: e- + e- + At5s1/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 196.27 eV!
    ```

21. Calculated and tabulated thresholds don't agree
    reaction label 20: e- + e- + At5p1/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 148.78 eV!
    ```

22. Calculated and tabulated thresholds don't agree
    reaction label 21: e- + e- + At5p3/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 117.82 eV!
    ```

23. Calculated and tabulated thresholds don't agree
    reaction label 22: e- + e- + At5d3/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 49.2 eV!
    ```

24. Calculated and tabulated thresholds don't agree
    reaction label 23: e- + e- + At5d5/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 45.06 eV!
    ```

25. Calculated and tabulated thresholds don't agree
    reaction label 24: e- + e- + At6s1/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 23.01 eV!
    ```

26. Calculated and tabulated thresholds don't agree
    reaction label 25: e- + e- + At6p1/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 11.94 eV!
    ```

27. Calculated and tabulated thresholds don't agree
    reaction label 26: e- + e- + At6p3/2 / Cross section: (Error # 0): Threshold mismatch

    ```
    WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 8.539999999999999 eV!
    ```

- xsectplotter   Warnings:

    1. Mislabled emitted particle
       Error: ZAP messed up

       ```
       stderr while processing crossSection

           WARNING: photon most likely labelled as an electron (ZAP = 11), converting to ZAP = 0
       ... [4 more lines]
       ```